Remarks

Claims 1-3 and 5-23 remain in the application. Claims 1, 12, 16, 17, 20 and 22 are hereby amended. No new matter is being added.

Claim Rejections -- 35 U.S.C. 102

Claims 1-3 and 5-23 were rejected under 35 U.S.C. 102 as being anticipated by Fung (US Patent Application Publication No. 2002/0004912). The independent claims in this application are hereby amended. This rejection is traversed with respect to the claims as now amended.

Claim 1 as amended now recites as follows:

1. A system for power management of a rack of computers, the system comprising:
server side infrastructure (SSI) circuitry at each computer in the rack, the SSI circuitry including local monitoring circuitry coupled to a central processing unit (CPU) of the computer; and
a centralized power management module (CPMM) with an out-of-band (OOB) management link to the SSI circuitry at each computer in the rack,
wherein the CPMM is configured to monitor power being consumed by the CPUs by sending a polling message to the SSI circuitry at each computer in the rack,
wherein the local monitoring circuitry within the SSI circuitry at each computer in the rack is configured to monitor power consumption at the CPU and to respond to the polling message from the CPMM by transmitting a root mean squared power consumption value to the CPMM, and
wherein the CPMM is further configured to apply a set of rules to the root mean squared power consumption values from the local monitoring circuitry to determine when and at which computers to enable and disable a CPU power throttling mode, and **wherein there is hysteresis between entry and exit of the power throttling mode such that power consumption values which induce throttling are higher than power consumption values at which throttling is removed**.

(Emphasis added.)

As previously presented, claim 1 was limited to a system for power management of an entire rack of computers in which a centralized power management module (CPMM) is configured to respond to a polling message by

transmitting a **"root mean squared power consumption value"** to the CPMM. This limitation is supported in the original specification, for example, on page 5, lines 11-13, which recites, "When polled, the local monitoring circuitry **104** may respond by transmitting via the management link **114** a root mean squared or other derived power consumption value to the CPMM **202**."

As currently amended, claim 1 is further limited such that "**there is hysteresis between entry and exit of the power throttling mode such that power consumption values which induce throttling are higher than power consumption values at which throttling is removed**."

This amendment is supported in the original specification, for example, on page 6, lines 23-28, which states, "In accordance with one embodiment, there may be a certain level of hysteresis between the rules to enter and exit CPU throttling mode. For example, the power consumption level which induces throttling may be higher than the power consumption level at which throttling is removed. Such hysteresis would prevent instances of rapid switching back and forth between CPU throttling and normal modes in borderline circumstances."

Applicants respectfully submit that the combination of elements in amended claim 1 is now patentably distinguished over the cited references of Fung in view of Loucks et al.

Claims 2-3 and 5-11 depend from claim 1. Hence, for at least the reasons discussed above in relation to claim 1, applicants respectfully submit that claims 2-3 and 5-11 are now also patentably distinguished over the cited art.

Claim 12 is amended similarly to claim 1 in that it now recites both "a **root mean squared power consumption value**" and "**there is hysteresis between entry and exit of the power throttling mode such that power consumption values which induce throttling are higher than power consumption values at which throttling is removed**." (Emphasis added.) Hence, for at least the reasons discussed above in relation to claim 1, applicants respectfully submit that claim 12 is now also patentably distinguished over Fung in view of Loucks et al.

Claims 13-15 depend from claim 12. Hence, for at least the reasons discussed above in relation to claim 12, applicants respectfully submit that claims 13-15 are now also patentably distinguished over the cited art.

Claim 16 is amended so as to pertain to **temperature** values rather than power consumption values. More particularly, amended claim 16 now recites, "wherein the management module is configured to ... receive temperature values from the local monitoring circuitry in response to the polling messages ...."

This amendment is supported in the original specification, for example, on page 7, lines 24-31, which states, "In accordance with another embodiment, the above design and architecture may be applied to a cooling (instead of power) infrastructure. For example, instead of monitoring power consumption, the local monitoring circuitry **104** may be applied to monitor temperatures at the various computers. If a temperature exceeds an allowed level for a computer, the power-throttling mode may be activated for that computer in order to counteract the elevated temperature. Alternatively, or in addition, additional cooling via a fan or thermoelectric cooler may be applied in response to the elevated temperature."

Applicants respectfully submit that the combination of elements in amended claim 16 is now patentably distinguished over the cited references of Fung in view of Loucks et al.

Claim 17 is amended similarly to claim 1 in that it now recites both "a **root mean squared power consumption value**" and "**there is hysteresis between entry and exit of a power throttling mode at each computer such that power consumption values which induce throttling are higher than power consumption values at which throttling is removed**." (Emphasis added.) Hence, for at least the reasons discussed above in relation to claim 1, applicants respectfully submit that claim 17 is now also patentably distinguished over Fung in view of Loucks et al.

Claims 18-19 depends from claim 17. Hence, for at least the reasons discussed above in relation to claim 17, applicants respectfully submit that claim 18-19 are now also patentably distinguished over the cited art.

Claim 20 is amended similarly to claim 16 so as to pertain to **temperature** values rather than power consumption values. Hence, for at least the reasons discussed above in relation to claim 16, applicants respectfully submit that claim 20 is now also patentably distinguished over Fung in view of Loucks et al.

Claim 21 depends from claim 20. Hence, for at least the reasons discussed above in relation to claim 20, applicants respectfully submit that claim 21 is now also patentably distinguished over the cited art.

Claim 22 is amended similarly to claim 1 in that it now recites both "a **root mean squared power consumption value**" and "**there is hysteresis between entry and exit of the CPU power throttling mode such that power consumption values which cause entry into the CPU power throttling mode are higher than power consumption values which cause exit of the CPU power throttling mode**." (Emphasis added.) Hence, for at least the reasons discussed above in relation to claim 1, applicants respectfully submit that claim 22 is now also patentably distinguished over Fung in view of Loucks et al.

Claim 23 depends from claim 22. Hence, for at least the reasons discussed above in relation to claim 22, applicants respectfully submit that claim 23 is now also patentably distinguished over the cited art.

Conclusion

For the above-discussed reasons, applicant believes that claims 1-3 and 5-23, as amended, are now patentably distinguished over the prior art. Favorable action is respectfully requested.

If for any reason an insufficient fee has been paid, the Commissioner is hereby authorized to charge the insufficiency to Deposit Account No. 08-2025.

Respectfully Submitted,

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